

LIST OF CLAIMS

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CLAIMS

1.(cancelled) A wall frame structure having an enclosing framework, including a plurality of pairs of load-bearing, substantially upright strut members having intermediate longitudinal portions thereof in mutually inclined relation, contained within said framework, and subject to longitudinal compressive loading.

19. (new) A structural panel unit for use in building structures, consisting of an outer frame forming the walls of a rectangular enclosure; reinforcing means comprising a plurality of pairs of individual members substantially uniformly distributed throughout the rectangular enclosure, the ends of said pairs of members abutting said enclosure walls; each individual member of said pairs of members having a first portion of its length inclined in mutually divergent relation from the other said individual member of said pair; each said member having an intermediate transition portion, and a second portion of its length adjoining said transition portions inclined in mutually convergent relation with the other said individual member, to form a substantially diamond-shaped enclosure; said diamond-shaped enclosures extending across the length and breadth of said rectangular enclosure, being bounded by a plurality of substantially triangular-shaped enclosures; said intermediate transition portions of a plurality of said members being in contacting, back-to-back, mutual supporting relation.

2.(currently amended) The ~~frame structure~~ structural panel unit as set forth in Claim [1] 19, wherein said ~~strut~~ individual members are of slender section modulus, prone to individually buckle under said longitudinal compressive loading of said individual members, said ~~strut member~~ pairs having their individual outer ends mutually joined, ~~and being mutually joined and~~ each said individual member of said pairs of members being

substantially immobilized at ~~a~~ locations intermediate their respective ends , to significantly reduce their respective tendency to deform under load .

3.(currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim 2, wherein side-wall members of said frame ~~structure~~ laterally constrain said ~~strut~~ individual members that are in contacting relation with said frame side-wall members.

4 (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim [1] 19, wherein upper end and lower end portions of each of said pairs of members are secured to each other , and at least one said intermediate transition portion ~~intermediate said end portions of a pair of said strut~~ members ~~are secured to each other, and~~ is fastened in predetermined location(s) within said framework.

5. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim [1] 19, wherein the upper and lower ends of a pair of said individual members are secured to each other, and attached to an adjoining , ~~laterally extending member of said framework.~~ portions of said rectangular enclosure.

6. (currently amended)The ~~frame-structure~~ structural panel unit as set forth in Claim 5, wherein ~~the upper and lower~~ said ends of a said pair of said ~~strut~~ individual members are glued to each other.

7. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim [1] 19, wherein said frame-structure rectangular enclosure includes including face sheets in enclosing relation with said ~~strut~~ pairs of members, wherein said ~~strut~~ pairs of members have having edge portions thereof secured to adjoining surface portions of said face sheets.

8. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim 7, wherein said ~~strut~~ member edge portions are glued to said adjoining surface portions of said face sheets.
9. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim 2, wherein a said pair of ~~struts~~ individual members are being laterally constrained at their centre by contact with adjoining pairs of said ~~struts~~ members.
10. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim 2, wherein one said ~~strut~~ individual member is being laterally constrained substantially at its centre by contact with an adjoining portion of said ~~framework~~ frame.
11. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim 10, wherein said one ~~strut~~ individual member is joined to an adjoining portion of said ~~framework~~ frame by fastening means selected from the group consisting of nails, staples and glue, and combinations thereof.
12. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim [2] 19, including a laterally extending tension member securing said intermediate transition portions of at least some of said ~~struts~~ individual members in mutually adjoined back-to-back relation.
13. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim [10] 12, wherein said tension member is being selected from the group consisting of strapping, wire and plastic filament.
14. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim [1] 19, wherein said ~~struts~~ individual members are selected from the material group consisting of plywood, wood, particle board, wafer board, low, medium and high density fiberboard panels, and Hardboard, laminated panels and fiberglass, metal and plastic.

15. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim 14, wherein said metal and plastic ~~struts~~ individual members ~~having~~ have a profiled cross section with side flanges extending for at least a portion of their length, and substantially planar end and centre portions.

16. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim 15, wherein said ~~struts~~ individual members each ~~having~~ has at least two portions of its length with said profiled cross section.

17. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim 15, wherein said ~~strut~~-individual members each ~~has~~ having at least four portions of its length with said profiled cross section.

18. (currently amended) The ~~frame-structure~~ structural panel unit as set forth in Claim[1] 19, said contacting intermediate transition portions of said individual members forming substantially triangular shaped interstices adjacent their contacting portions; wherein having plastic foam is located in contacting supporting relation with said ~~strut intermediate portions~~ individual members at said interstices, in use to resist lateral deformation of said ~~struts~~ individual members when said individual members are subjected to ~~said~~ compressive loading.